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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,085	08/19/2003	Ricardo San Martin	LOPEZ-4	3063
23599	7590	04/13/2006	EXAMINER	
MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			WILKINS III, HARRY D	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 04/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/643,085	Applicant(s) SAN MARTIN ET AL.	
	Examiner Harry D. Wilkins, III	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bultman et al (US 4,484,990) in view of Niwase (JP 09-227345) with support from Nord et al (for claims 3 and 7) and Salas-Morales et al (US 5,635,051) and Kulperger (US 5,503,766).

Bultman et al teach (see abstract) a method for inhibiting acid misting in copper electrowinning comprising adding a surfactant to the electrolyte from which copper is electrowon. The surfactant acts to create a foam thereby preventing the bubbles formed at the anode from forming a mist which caused a hazardous work environment.

Bultman et al fail to teach that the surfactant added was a soluble surfactant comprising an extract from the *Quillaja saponaria* Molina tree.

However, Niwase teaches (see English abstract) that extracts from the *Quillaja saponaria* Molina tree had excellent surfactant properties.

Therefore, it would have been obvious to one of ordinary skill in the art to have used the surfactant extract from the *Quillaja saponaria* Molina tree as suggested by Niwase in the copper electrowinning electrolyte of Bultman et al because Niwase teaches that the extracts had excellent surfactant properties.

Additionally, Salas-Morales et al describe (see col. 6, lines 34-44) other, non-fluoroaliphatic surfactants were known to be used in copper electrowinning processes for the purpose of creating foams which reduced misting. Therefore, one of ordinary skill in the art would have had a reasonable expectation of successfully utilizing non-fluoroaliphatic surfactants to replace the surfactant of Bultman et al.

Further, Kulperger teach (see paragraph spanning cols. 1 and 2) that the extracts of the *Quillaja Saponaria* Molino were well known to impart foaming attributes, was water soluble, was non-ionic and was inert to most chemicals. It was even used in soft drinks, which include a high acid concentration. Thus, one of ordinary skill in the art would have expected to be quite suitable in the acidic copper sulfate/sulfuric acid electrolyte of the electrowinning process of Bultman et al.

Regarding claim 2, Niwase teaches (see English abstract) that the extract was composed of a triterpenoid-based saponin.

Regarding claim 3, Niwase fails to teach that structure of the triterpenoid-based saponin. However, Nord et al teach (see pages 199-200) that the extract from the bark of the *Quillaja saponaria* Molina tree included a heterogenous mixture of triterpenoid-based saponins, having a triterpenic core (see figure1) with sugar chains (R^1 and R^2) at the 3 and 28 positions. Therefore, the extract taught by Niwase is considered to inherently possess the claimed composition/structure.

Regarding claims 4-6, Bultman et al teach (see col. 9, lines 45-58) using surfactant concentrations of 1-200 ppm. Therefore, it would have been obvious to one of ordinary skill in the art to have used similar concentrations with the surfactant of

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Niwase. The surfactant is considered to inherently possess the same properties since it had the same composition and would have been used in the same concentration range.

Regarding claim 7, the structure of claim 7 is identical to the structure disclosed by Nord et al in figure 1, with a few exceptions. R^1 of Nord et al corresponds to the trisaccharide present at the left hand side of the structure. However, Nord et al teach (see caption of figure 1) that R^1 could be a branched trisaccharide. R^4 of claim 7, corresponds to R^4 of Nord et al. R^4 of claim 7 corresponds to R^3 of Nord et al. The R^2 structure of Nord et al, an oligosaccharide, corresponds to the structure of the molecule below the "X" on the lower right portion of the structure in claim 7.

Response to Arguments

3. Applicant's arguments filed 6 March 2006 have been fully considered but they are not persuasive. Applicant has argued that there is no motivation to combine the teachings of Bultman et al of electrowinning with the teachings of Niwase with respect to teaching a surfactant because Niwase fails to disclose electrowinning.

In response, the Examiner is not persuaded. The prior art is replete with examples of surfactants that are used in both shampoos and to improve electrowinning characteristics. Similar to the fluoroaliphatic surfactant of Bultman et al, Pavlik et al disclose using fluoroaliphatic surfactants in shampoos. Young et al teach using guar as a surfactant in a copper electrowinning process and Bolich, Jr et al teach using guar as a surfactant in a shampoo. In addition to these examples, evidence that one of ordinary skill in the art would have had a reasonable expectation of successfully using the saponin extract in a copper electrowinning process is shown above in the rejection

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grounds. However, since these references are merely added as evidence showing the reasonable expectation of success, and the rejection grounds of Bultman et al in view of Niwase would stand alone without them, they do not constitute new grounds of rejection.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

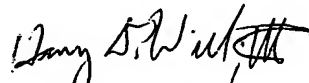
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D. Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Harry D Wilkins, III
Examiner
Art Unit 1742

hdw


ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700